CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.11/GR/CSR-03/1092b/CEMENT/2015-16

Date: 10.03.2016

TEST REPORT ON CEMENT

*** CUSTOMER**	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Mr. Gopi Reddy,** No.03, First Cross, First Main, Ramachandrappa Layout, Arebic College post, Erannapalya, Bangalore – 560045.
***NAME OF THE WORK**	:	Providing and Installation water Purification unit at MS Palya surrounding area in Ward No.11 (Kuvempunagara), Vidyaranyapura Sub Division, BBMP, Bangalore.
***REFERENCE**	:	EE/BTP/BBMP/E-PMT/256/2015-16 Dated: 26.02.2016
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	09.03.2016
PERIOD OF TESTING	:	09.03.2016 to 10.03.2016

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	150 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	480 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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VISHWANATH .C
Quality Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.11/GR/CSR-03/1092b/SAND-Gradation/2015-16 : 10.03.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. Gopi Reddy,**
No.03, First Cross, First Main, Ramachandrappa Layout, Arebic College post, Erannapalya, Bangalore – 560045.

*** Name of Work** : Providing and Installation water Purification unit at MS Palya surrounding area in Ward No.11 (Kuvempunagara), Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/256/2015-16 Dated: 26.02.2016

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 09.03.2016

Date of Testing : 10.03.2016

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	95.00	90-100	90-100	90-100	95-100
2.36	76.50	60-95	75-100	85-100	95-100
1.18	56.00	30-70	55-90	75-100	90-100
600 Micron	34.80	15-34	35-59	60-79	80-100
300 Micron	19.00	5-20	8-30	12-40	15-50
150 Micron	6.20	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Quality Manager

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Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.11/GR/CSR-03/1092b/AGG/GR/2015-16 : 10.03.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. Gopi Reddy,**
No.03, First Cross, First Main, Ramachandrappa Layout, Arebic College post, Erannapalya, Bangalore – 560045.

*** Name of Work** : Providing and Installation water Purification unit at MS Palya surrounding area in Ward No.11 (Kuvempunagara), Vidyaranyapura Sub Division, BBMP,

Reference : EE/BTP/BBMP/E-PMT/256/2015-16 Dated: 26.02.2016

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 09.03.2016

Date of Testing : 10.03.2016

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.50	95-100	85-100
20	45.50	30-70	0-20
10	18.65	10-35	0-5
4.75	2.65	0-5	-

AE-11

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* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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VISHWANATH .C
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E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.11/GR /STEEL/2015-16 10.03.2016

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Gopi Reddy,** No.03, First Cross, First Main, Ramachandrappa Layout, Arebic College post, Erannapalya, Bangalore – 560045.
Name of the work	:	Providing and Installation water Purification unit at MS Palya surrounding area in Ward No.11 (Kuvempunagara), Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	:	EE/BTP/BBMP/E-PMT/256/2015-16 Dated: 26.02.2016
Date of Test	:	10.03.2016
Technical Reference	:	IS: 1786-2008

AE-II

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Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	516	556	13.20	O.K	O.K

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23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

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T-2377

Job No.: CTCE/BBMP/W.No.11/GR/CSR-03/1092b/CC Solid Block/2015-16 : 10.03.2016

TEST REPORT ON SOLID CONCRETE BLOCKS

*** Customer** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. Gopi Reddy,**
No.03, First Cross, First Main, Ramachandrappa Layout, Arebic College post, Erannapalya, Bangalore – 560045.

*** Name of the Work** : Providing and Installation water Purification unit at MS Palya surrounding area in Ward No.11 (Kuvempunagara), Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/256/2015-16 Dated: 26.02.2016

Sample Received on : 09.03.2016

Date of Testing : 10.03.2016

Size of Blocks : 400mm x 200mm x 200mm

Cross Sectional Area : 80000 mm^2

Technical Reference : IS: 2185 (Part 1) - 2005

No. of Blocks Tested : 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	34.21	259.3	3.24	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	35.25	260.3	3.25	
3	Block 3	34.25	261.3	3.27	
4	Block 4	36.32	262.1	3.28	
5	Block 5	35.15	263.1	3.29	
6	Block 6	34.35	260.4	3.26	
7	Block 7	34.65	259.8	3.25	
8	Block 8	35.62	260.5	3.26	

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VISHWANATH .C
Quality Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.11/GR/CSR-03/1092b/CUBE/2015-16 13.04.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. Gopi Reddy,**
No.03, First Cross, First Main, Ramachandrappa Layout, Arebic College post, Erannapalya, Bangalore – 560045.

*** Name of the work** : Providing and Installation water Purification unit at MS Palya surrounding area in Ward No.11 (Kuvempunagara), Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Reference** : EE/BTP/BBMP/E-PMT/256/2015-16 Dated: 26.02.2016

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 13.04.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	16.03.2016	13.04.2016	8.158	475.5	21.13
2	16.03.2016	13.04.2016	8.265	493.6	21.94
3	16.03.2016	13.04.2016	8.374	512.6	22.78

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#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
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E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.11/GR/CSR-03/1092b/Bricks/2015-16 : 10.03.2016

TEST REPORT ON BRICKS

*** Customer** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. Gopi Reddy,** No.03, First Cross, First Main, Ramachandrappa Layout, Arebic College post, Erannapalya, Bangalore – 560045.

*** Name of the work** : Providing and Installation water Purification unit at MS Palya surrounding area in Ward No.11 (Kuvempunagara), Vidyaranyapura Sub Division, BBMP, Bangalore.

Sample ID/Type of Test : Bricks / Water Absorption of Bricks

Technical Reference : IS: 3495(Part-2)- 1992 (RA-2007)

Sample Received on : 09.03.2016

Date of Testing : 10.03.2016

Sl.No.	Size of Bricks in mm	Dry weight in gms	Wet weight in gms	Water Abosorption in %	Average Water Absorption in %
1	220x100x75	2935	3290	12.10	11.75
2	220x100x75	2980	3325	11.58	
3	220x100x75	2985	3295	10.39	
4	220x100x75	2990	3385	13.21	
5	220x100x75	2915	3250	11.49	

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TEST REPORT ON BRICKS

*** Customer** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. Gopi Reddy,**
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*** Name of the work** : Providing and Installation water Purification unit at MS Palya surrounding area in Ward No.11 (Kuvempunagara), Vidyaranyapura Sub Division, BBMP, Bangalore.

Sample ID/Type of test : Bricks / Compressive Strength of Bricks

Technical Reference : IS: 3495(Part-1)- 1992 (RA-2007)

Sample Received on : 09.03.2016

Date of Testing : 10.03.2016

Sl.No.	Size of Bricks are in mm	Weight of Bricks in Kg	Failure load in KN	Compressive Strength (N/mm^2)	Average Compressive Strength (N/mm2)
1	220x100x75	3.433	132.5	6.02	5.93
2	220x100x75	3.452	130.5	5.93	
3	220x100x75	3.477	129.5	5.89	
4	220x100x75	3.489	130.4	5.93	
5	220x100x75	3.296	129.8	5.90	

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